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PASSWORD:

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                Web Page URLs for STN Seminar Schedule - N. America
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                 "Ask CAS" for self-help around the clock
NEWS 3
                CA/CAplus records now contain indexing from 1907 to the
        SEP 09
                present
NEWS 4
        Jul 15 Data from 1960-1976 added to RDISCLOSURE
NEWS 5 Jul 21
                Identification of STN records implemented
NEWS 6
        Jul 21
                 Polymer class term count added to REGISTRY
NEWS 7
        Jul 22
                INPADOC: Basic index (/BI) enhanced; Simultaneous Left and
                 Right Truncation available
NEWS 8
        AUG 05
                New pricing for EUROPATFULL and PCTFULL effective
                 August 1, 2003
NEWS 9
        AUG 13
                 Field Availability (/FA) field enhanced in BEILSTEIN
NEWS 10
        AUG 15
                 PATDPAFULL: one FREE connect hour, per account, in
                 September 2003
NEWS 11 AUG 15
                 PCTGEN: one FREE connect hour, per account, in
                 September 2003
                 RDISCLOSURE: one FREE connect hour, per account, in
NEWS 12
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                 September 2003
NEWS 13
        AUG 15
                TEMA: one FREE connect hour, per account, in
                 September 2003
NEWS 14 AUG 18
                Data available for download as a PDF in RDISCLOSURE
NEWS 15 AUG 18
                Simultaneous left and right truncation added to PASCAL
NEWS 16 AUG 18
                FROSTI and KOSMET enhanced with Simultaneous Left and Righ
                 Truncation
NEWS 17 AUG 18
                 Simultaneous left and right truncation added to ANABSTR
NEWS 18 SEP 22
                DIPPR file reloaded
NEWS 19 SEP 25
                INPADOC: Legal Status data to be reloaded
NEWS 20 SEP 29
                DISSABS now available on STN
NEWS EXPRESS OCTOBER 01 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
             MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
             AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
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NEWS INTER
             General Internet Information
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             Welcome Banner and News Items
NEWS PHONE
             Direct Dial and Telecommunication Network Access to STN
NEWS WWW
             CAS World Wide Web Site (general information)
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10030188.1

Page 2

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=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY 0.21 SESSION 0.21

FULL ESTIMATED COST

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STRUCTURE FILE UPDATES:

3 OCT 2003 HIGHEST RN 598296-84-5

DICTIONARY FILE UPDATES:

3 OCT 2003 HIGHEST RN 598296-84-5

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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Uploading 10030180.1

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1

STR

Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss full

FULL SEARCH INITIATED 14:03:58 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED -365 TO ITERATE

100.0% PROCESSED

365 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

L2

1 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

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TOTAL SESSION

FULL ESTIMATED COST

148.15 148.36

FILE 'CAPLUS' ENTERED AT 14:04:05 ON 06 OCT 2003 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 6 Oct 2003 VOL 139 ISS 15 FILE LAST UPDATED: 5 Oct 2003 (20031005/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L3
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     ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
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     136:263090
     Preparation of cyclic amine derivatives for inhibition of the action of
TΙ
     chemokines such as MIP-1.alpha. and/or MCP-1 on target cells
IN
     Shiota, Tatsuki; Kataoka, Ken-Ichiro; Imai, Minoru; Tsutsumi, Takaharu;
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     Yumiko; Takenouchi, Osami; Furuya, Minoru; Endo, Noriaki; Tarby, Christine
     M.; Moree, Wilna; Teig, Steven
PA
     Teijin Limited, Japan; Dupont Pharmaceuticals Research Laboratories
SO
     U.S., 364 pp., Cont. of U.S. Ser. No. 554,562.
     CODEN: USXXAM
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LΑ
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MARPAT 136:263090
226248-06-2P, Benzeneacetamide, N-[[1-[(4-chlorophenyl)methyl]-4-
piperidinyl]methyl]-.alpha.-[(3-ethoxybenzoyl)amino]-, (.alpha.R)-
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
   (prepn. of cyclic amine derivs. for inhibition of action of chemokines
   such as MIP-1.alpha. and/or MCP-1 on target cells)
226248-06-2 CAPLUS
Benzeneacetamide, N-[[1-[(4-chlorophenyl)methyl]-4-piperidinyl]methyl]-
.alpha.-[(3-ethoxybenzoyl)amino]-, (.alpha.R)- (9CI) (CA INDEX NAME)
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Absolute stereochemistry.

OS

IT

RN CN

GΙ

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R^{1} & \downarrow & \downarrow \\
R^{2} & \downarrow & \downarrow \\
R^{2} & \downarrow & \downarrow \\
\end{array}$$

$$\begin{array}{c|c}
CH_{2} & \downarrow & \downarrow \\
\hline
M_{m} & \downarrow & \downarrow \\
\end{array}$$

$$\begin{array}{c|c}
CH_{2} & \downarrow & \downarrow \\
\hline
R^{4} & \downarrow \\
CH_{2} & \downarrow \\
\hline
R^{5} & \downarrow \\
\end{array}$$

$$\begin{array}{c|c}
CH_{2} & \downarrow \\
\hline
R^{4} & \downarrow \\
CH_{2} & \downarrow \\
\hline
R^{6} & \downarrow \\
\end{array}$$

$$\begin{array}{c|c}
CH_{2} & \downarrow \\
\hline
R^{6} & \downarrow \\
\end{array}$$

The title compds. [I; R1 = (un) substituted Ph, cycloalkyl, heteroaryl, etc.; R2 = H, alkyl, alkoxycarbonyl, etc.; j = 0-2; k = 0-2; m = 3-4 and k+m = 5 or 6; n = 0-1; R3 = H, alkyl; R4, R5 = H, OH, Ph, etc.; p, q = 0-1; G = CO, SO, CO2, etc.; R6 = Ph, cycloalkyl, cycloalkenyl, etc.] and their pharmaceutically acceptable acid addn. salts which inhibit the action of chemokines such as MIP-1.alpha. and/or MCP-1 on target cells and may be useful as a therapeutic drug and/or preventative drug in diseases, such as atherosclerosis, rheumatoid arthritis, and the like where blood monocytes and lymphocytes infiltrate into tissues, were prepd. Thus, reaction of N-benzoylglycine with 3-amino-1-(4-chlorobenzyl)pyrrolidine.2HCl in the presence of 3-ethyl-1-[3-(dimethylaminopropyl)]carbodiimide.HCl, 1-hydroxybenzotriazole and Et3N in CHCl3 afforded 95% II which showed 50-80% inhibition of MIP-1.alpha. binding to THP-1 cells at 10 .mu.M.

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
- AN 2000:824101 CAPLUS
- DN 134:5154
- TI Preparation of cyclic amine derivatives as remedies or preventives for diseases in association with chemokines or chemokine receptors
- IN Shiota, Tatsuki; Miyagi, Fuminori; Kamimura, Takashi; Ohta, Tomohiro; Takano, Yasuhiro; Horiuchi, Hideki

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10030188.1
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Page 7

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PA
     Teijin Limited, Japan
SO
     PCT Int. Appl., 405 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     Japanese
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             SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU,
             ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
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OS
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    226248-06-2P
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
    BIOL (Biological study); PREP (Preparation); USES (Uses)
        (prepn. of cyclic amine derivs. as remedies or preventives for diseases
        in assocn. with chemokines or chemokine receptors)
RN
    226248-06-2 CAPLUS
    Benzeneacetamide, N-[[1-[(4-chlorophenyl)methyl]-4-piperidinyl]methyl]-
CN
```

.alpha.-[(3-ethoxybenzoyl)amino]-, (.alpha.R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

GI

AB Remedies or preventives for diseases in assocn. with chemokines such as MIP-1.alpha. and/or MCP-1 or chemokine receptors such as CCR1 or CCR2 contain as the active ingredient N-acyl-amino acid N-cyclic amino or N-cyclic aminoalkyl-amide derivs. represented by general formula [I; (un) substituted Ph, C3-8 cycloalkyl, arom. heterocyclyl contg. 1-3 heteroatoms selected from O, S, and/or N; R2 = H, (un)substituted C1-6 alkyl, C2-7 alkoxycarbonyl, HO, (un) substituted Ph; p1, m1 = 0-2; m = 2-4; n = 0.1; R3 = H, (un) substituted C1-6 alkyl; R4, R5 = H, OH, (un) substituted Ph or C1-6 alkyl; or R4 and R5 are combined together to form a 3- to 5-membered hydrocarbyl; p, q = 0.1; G = CO, SO2, CO2, NR7CO, CONR7, NR7SO2, or SO2NR7, NHCONH, NHCSNH, NH CO2, O2CNH; R7 = H, C1-6 alkyl; or R7 and R5 are combined together to form C2-5 alkylene; R6 = (un) substituted Ph, C3-8 cycloalkyl, C3-6 cycloalkenyl, CH2Ph, or arom. heterocyclyl contg. 1-3 heteroatoms selected from O, S, and/or N, wherein Ph, CH2Ph, or arom. heterocyclyl group is optionally fused with (un) substituted benzene or arom. heterocyclyl contq. 1-3 heteroatoms selected from O, S, and/or N], pharmaceutically acceptable acid-adducts thereof, or pharmaceutically acceptable C1-6 alkyl-adducts thereof. The above diseases include destruction of bone or cartilage (e.g. arthritis, rheumatoid arthritis, osteoarthritis, osteoporosis, injury, and tumor), nephritis, kidney diseases, glomerulus or interstitial nephritis, nephrotic syndrome, demyelinating disease, or multiple sclerosis. N-3-ethoxybenzyl-D-methionine-N-[1-(4-chlorobenzyl)-4piperazinylmethyl]amide in vitro inhibited the binding of human MIP-1.alpha. to THP-1 cells by >80% at 2 .mu.M.

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
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AN 1999:350650 CAPLUS

DN 131:18925

TI Preparation of cyclic amine derivatives for inhibition of the action of chemokines such as MIP-1.alpha. and/or MCP-1 on target cells

IN Shiota, Tatsuki; Kataoka, Kenichiro; Imai, Minoru; Tsutsumi, Takaharu;
Sudoh, Masaki; Sogawa, Ryo; Morita, Takuya; Hada, Takahiko; Muroga,
Yumiko; Takenouchi, Osami; Furuya, Monoru; Endo, Noriaki; Tarby, Christine
M.; Moree, Wil A.; Teig, Steven L.

PA Teijin Ltd., Japan; Combichem, Inc.

SO PCT Int. Appl., 374 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

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PATENT NO. KIND DATE APPLICATION NO. DATE

WO 9925686 Al 19990527 WO 1998-US23254 19981117

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, US, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD,
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## PATENT FAMILY INFORMATION:

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OS MARPAT 131:18925

## IT 226248-06-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of cyclic amine derivs. for inhibition of the action of chemokines such as MIP-1.alpha. and/or MCP-1 on target cells)

RN 226248-06-2 CAPLUS

CN Benzeneacetamide, N-[[1-[(4-chlorophenyl)methyl]-4-piperidinyl]methyl]alpha.-[(3-ethoxybenzoyl)amino]-, (.alpha.R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

GΙ

$$\begin{array}{c|c}
R^{1} & \downarrow & \downarrow \\
R^{2} & \downarrow & \downarrow \\
R^{2} & \downarrow & \downarrow \\
\end{array}$$

$$\begin{array}{c|c}
CH_{2} & \downarrow & \downarrow \\
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M & CH_{2} & \downarrow \\
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The title compds. [I; R1 = (un)substituted Ph, cycloalkyl, heteroaryl, etc.; R2 = H, alkyl, alkoxycarbonyl, etc.; j = 0-2; k = 0-2; m = 2-4; n = 0-1; R3 = H, alkyl; R4, R5 = H, OH< Ph, etc.; p = 0-1; q = 0-1; G = CO, S0, C02, etc.; R6 = Ph, cycloalkyl, cycloalkenyl, etc.] and their pharmaceutically acceptable acid addn. salts which inhibit the action of chemokines such as MIP-1.alpha. and/or MCP-1 on target cells and may be useful as a therapeutic drug and/or preventative drug in diseases, such as atherosclerosis, rheumatoid arthritis, and the like where blood monocytes and lymphocytes infiltrate into tissues, were prepd. Thus, reaction of N-benzoylglycine with 3-amino-1-(4-chlorobenzyl)pyrrolidine.2HCl in the presence of 3-ethyl-1-[3-(dimethylaminopropyl)]carbodimide.HCl, 1-hydroxybenzotriazole and Et3N in CHCl3 afforded 95% II which showed 50-80% inhibition of MIP-1.alpha. binding to THP-1 cells at 10 .mu.M.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN AN 1999:375527 CAPLUS

DN 131:31874

TI Preparation of amidinophenylpropionylindoles and related compounds as thrombin inhibitors.

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Heckel, Armin; Walter, Rainer; Soyka, Rainer; Stassen, Jean-Marie; Wienen,
IN
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OS MARPAT 131:31874 GI

$$R^4$$
 $R^3$ 
 $R^2$ 
 $R^3$ 

AB Title compds. [I; R1 = F, C1, Br, CO2H, aminocarbonyl, aminosulfonyl, amino, group convertible to CO2H in vivo; 1 of R2, R4 = (CO2H- or group convertible to CO2H in vivo-substituted) alkyl, the other = R5A; A = (CO2H- or group convertible to CO2H in vivo-substituted) alkylene, etc.; R5 = R6NHC(:NH)-substituted Ph; R4 = H, alkyl; R6 = H, in vivo-cleavable group], were prepd. as antithrombotics with inhibitory activity against serine proteases XII and fibrinogen receptors.

Thus, 3-[3-(4-amidinophenyl)propionyl]-1-methylindole-5-carboxylic acid N-(2-carboxyethyl)-N-phenylamide hydrochloride (prepn. given) showed a thrombin time ED200 = 0.80 .mu.M.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s 15 indole and piperidine
MISSING OPERATOR L5 INDOLE
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s 15 and indole and piperidine L9 0 L5 AND INDOLE AND PIPERIDINE 10030188.1 Page 13

=> log y COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
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        (prepn. of amino acid derivs. as serine protease inhibitors)
RN
    380900-59-4 CAPLUS
CN
    Benzeneacetamide, .alpha.-[(4-methoxybenzoyl)amino]-N-[[1-(1-methylethyl)-
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AB Compds. R2-X-X-Y(Cy)-L-Lp(D)n [R2 is a 5- or 6-membered arom. carbon ring

4-piperidinyl]methyl]-2-[(trifluoromethyl)thio]- (9CI) (CA INDEX NAME)

optionally interrupted by a N, O or S ring atom, optionally substituted at the 3 and/or 4 position or forms a fused ring system at these positions, which is an optionally substituted 5- or 6-membered carbocyclic or heterocyclic ring, or substituted at the position alpha to X-X; X is a C, N, O or S atom or a CO, CR1a, C(R1a)2 or NR1a group, where R1a represents H, OH, alkoxy, alkyl, aminoalkyl, hydroxyalkyl, alkoxyalkyl, alkoxycarbonyl, alkylaminocarbonyl, alkoxycarbonylamino, acyloxymethoxycarbonyl or alkylamino optionally substituted by OH, alkylamino, alkoxy, oxo, aryl or cycloalkyl; Y is a N atom or a CR1b group (R1b defined as for R1a); Cy is an (un)substituted, (un)satd., mono- or polycyclic, homo- or heterocyclic group; L is an org. linker group contg. 1 to 5 backbone atoms selected from C, N, O and S, or a branched alkyl or cyclic group; -Lp(D)n is 1-[R10-(Lb)u-(G)t-(La)s]-3-pyrrolidinyl or -4-piperidinyl, where s, t and u = 0 or 1; La and Lb is a single bond, CO, O, NH or alkylimino; G = alkanediyl; R10 = alkyl, cycloalkyl, indanyl, pyridyl, tetrahydropyranyl, (un)substituted Ph, etc.] or their physiol.-tolerable salts were prepd. for use as serine protease and factor Xa inhibitors in the treatment of cardiovascular disorders. Compds. of the invention were found to significantly elongate the partial thromboplastin time (prothrombin time). Thus, 4-[(4-methoxybenzoyl-Dphenylglycinyl)aminomethyl]-1-isopropylpiperidine was prepd. in the first of 106 examples.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s serine protease and factor xa L5 527 SERINE PROTEASE AND FACTOR XA

=> s 15 and Thrombotic disorders L6 7 L5 AND THROMBOTIC DISORDERS

=> d l6 fbib hitstr abs total

L6 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

AN 2003:634690 CAPLUS

TI SAR investigation on the in-vitro metabolism of 1,2-aminoethanol-derived non-covalent factor Xa inhibitors

AU Sheehan, Scott M.; Watson, Brian M.; Wiley, Michael R.; Liebeschuetz, J. W.; Sall, Daniel J.; Franciskovich, Jeffry B.; Marimuthu, Jothirajah; Smallwood, Jeffrey K.; Patel, Nita J.; Woodland, Joseph; Barbuch, Robert; Craft, Trelia J.; Gifford-Moore, Donetta; Farmen, Mark W.; Towner, Richard D.; Smith, Gerald F.

CS Lilly Research Laboratories, Eli Lilly and Company, Indianapolis, IN, 46285, USA

SO Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003), MEDI-082 Publisher: American Chemical Society, Washington, D. C. CODEN: 69EKY9

DT Conference; Meeting Abstract

LA English

AB The trypsin-like serine protease factor

Xa (fXa) plays a key role in the coagulation cascade and is responsible for the conversion of prothrombin to thrombin. As a result, inhibition of fXa has emerged as a promising approach for the treatment of

thrombotic disorders. We have recently discovered a series of novel 1,2-aminoethanol-derived factor Xa inhibitors and we investigated the surrogate metabolic profile of these derivs. Metabolite identification studies have revealed sites of potential oxidative metab. In this presentation, the synthesis of these 1,2-aminoethanol-derived fXa inhibitors and their corresponding enzyme inhibitory activity will be disclosed. Discussion will focus on the impact of inhibitor structural modification on obsd. surrogate metab. in human, rat, dog, and monkey microsomes.

- L6 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
- AN 2000:709216 CAPLUS
- DN 134:231346
- TI An update on heparins at the beginning of the new millennium
- AU Fareed, Jawed; Hoppensteadt, Debra A.; Bick, Rodger L.
- CS Hemostasis & Thrombosis Research Laboratories, Department of Pathology and Pharmacology, Loyola University Medical Center, Maywood, IL, 60153, USA
- SO Seminars in Thrombosis and Hemostasis (2000), 26(Suppl. 1), 5-21 CODEN: STHMBV; ISSN: 0094-6176
- PB Thieme Medical Publishers, Inc.
- DT Journal; General Review
- LA English
- AΒ A review with 35 refs. Unfractionated heparin has enjoyed the sole anticoagulant status for almost half a century. Besides an effective anticoagulant, this drug has been used in several addnl. indications. Despite the development of newer anticoagulant drugs, unfractionated heparin has remained the drug of choice for surgical anticoagulation and interventional cardiol. In the area of hematol. and transfusion medicine, unfractionated heparin has continued to play a major role as an anticoagulant drug. The development of low-mol.-wt. heparins (LMWHs) represents a refinement for the use of heparin. These drugs represent a class of depolymd. heparin derivs. with a distinct pharmacol. profile that is largely detd. by their compn. These drugs produce their major effects by combining with antithrombin and exerting antithrombin and anti-Xa inhibition. In addn., the LMWHs also increase non-antithrombin-dependent effects such as TFPI release, modulation of adhesion mols., and release of pro-fibrinolytic and antithrombotic mediators from the blood vessels. cumulative effects of each of the different LMWHs differ and each product exhibits a distinct profile. Initially these agents were developed for the prophylaxis of postsurgical deep-vein thrombosis. However, at this time these drugs are used not only for prophylaxis, but also for the treatment of thrombotic disorders of both the venous and arterial type. To a large extent, the LMWHs have replaced unfractionated heparin in most s.c. indications. With the use of these refined heparins, outpatient anticoagulant management has gone through a dramatic evolution. For the first time, patients with thrombotic disorders can be treated in an outpatient setting. Thus, the introduction of LMWHs represents a major advance in improving the use of heparin. The development of the oral formulation of heparin and LMWHs also provides an important area that may impact on the use of heparin and LMWHs. The increased awareness of heparin-induced thrombocytopenia has necessitated the development of newer methods to identify patients at risk of developing this catastrophic syndrome. Furthermore, a strong interest has developed in alternate drugs or the management of patients with this syndrome. Despite the development of alternate anticoaqulants that are mostly antithrombin derived (hirudins, hirulog), these agents have failed to provide similar clin. outcome as heparin in many indications. antithrombin drugs are useful in the anticoagulant management of

heparin-compromised patients. The FDA has approved a recombinant hirudin (Refludan) and a synthetic antithrombin agent, argatroban (Novastan), for this indication. The development of synthetic heparin pentasaccharide and anti-Xa agents may have an impact on the prophylaxis of thrombotic disorders. However, these monotherapeutic agents do not mimic the polytherapeutic actions of heparin. Furthermore, these agents do not inhibit thrombin. Heparin and LMWHs are capable of inhibiting not only factor Xa and thrombin, but other serine proteases in the coagulation network. The only way the newer drugs can mimic the actions of heparin is in combination modalities (polytherapeutic approaches). It has been suggested that newer antiplatelet drugs also exhibit anticoagulant actions. While these drugs may exhibit weak effects on thrombin generation, none of the currently available antiplatelet drugs exhibit any degree of antithrombin actions. It is likely that heparins synergize or augment the effects of the new antiplatelet drugs. Currently, combination approaches are used to anticoaqulate patients in these studies. The dosage of heparins has been arbitrarily reduced. This may not be an optimal procedure. Addnl. clin. studies are needed to study these. Combinations where the alterations of these drugs are compared. Such combinations will require newer monitoring approaches. The development of oral thrombin agents, GP IIb/IIIa inhibitors, has met with some significant obstacles. Thus, it is unlikely that this approach will be very feasible in the indications where heparins are used. It is fair to state that heparins will continue to play a major role in the overall management of thrombotic disorders in monotherapeutic and polytherapeutic modalities.

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L6
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     1999:640853 CAPLUS
AN
DN
     131:271815
ΤI
     Preparation of 2(1H)-quinolinones as serine protease
     inhibitors for treatment of thrombotic disorders
IN
     Dudley, Danette Andrea; Edmunds, Jeremy John
PΑ
     Warner-Lambert Co., USA
SO
     PCT Int. Appl., 136 pp.
     CODEN: PIXXD2
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     Patent
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     English
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     PATENT NO.
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	NO	2000004696	Α	20000920	NO 2000-4696 20000920
					US 1998-80090P P 19980331
					WO 1998-US26709W 19981215
OS GI	MAI	RPAT 131:2718	15		

AB 2(1H)-Quinolinones (I) [where A = CH2, CH, or C(alkyl); B and D = independently H, (un)substituted (cyclo)alkyl, hetero(cyclo)alkyl, aryl(alkyl), or heterocycle; E = absent or O, S, or NH; F = N, NCH2, or CH2N; G and (un)substituted K = independently absent or (cyclo)alkyl interrupted by 1 or more heteroatoms; J = absent or (un)substituted aryl or heterocycle; L = H, halogen, OH, (un)substituted alkoxy, alkyl, amino, etc.; X1-X4 = independently C or N], which display inhibitory effects on serine proteases such as factor Xa, thrombin and/or factor VIIa, were prepd. For example, 1,5-dibromopentane was added to 4-(benzyloxy)-3-(2-oxo-1,2,3,4-tetrahydro-3-quinolinyl)benzenecarbonitrile (5-step prepn. given) to yield the N-substituted tetrahydroquinolinone. Cis-2,6-dimethylpiperidine was added to the 5-bromopentylquinolinone to form the piperidinylpentyl deriv. This intermediate was converted to the title quinolinone II.2HCl by treatment

with NH2OH.HCl followed by addn. of CF3CO2H and redn. with Pd/C. Typically, the compds. of the invention showed 50% inhibition of factor  $\mathbf{Xa}$  proteolytic activity on a synthetic substrate in concns. ranging from 50 .mu.M to 1 nM. II demonstrated inhibitory activity in std. assays of thrombin (IC50 = 1.14 .mu.M), trypsin (IC50 = 0.562 .mu.M), and factor  $\mathbf{Xa}$  (IC50 = 0.02 .mu.M). Compds. of the invention are claimed to be useful in the treatment or prevention of venous and arterial thrombosis, pulmonary embolism, myocardial and cerebral infarction, restenosis, cancer, angina, diabetes, heart failure, and atrial fibrillation in mammals.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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AN
     1999:640844 CAPLUS
DN
     131:271886
ΤI
     Preparation of quinoxalinones as serine protease
     inhibitors for treatment of thrombotic disorders
IN
     Dudley, Danette Andrea; Edmunds, Jeremy John
PA
     Warner-Lambert Co., USA
SO
     PCT Int. Appl., 104 pp.
     CODEN: PIXXD2
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OS MARPAT 131:271886 GI

- \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT \*
- AR 2(1H)-Quinoxalinones (I) [where A = N, N(alkyl)CH2, CH2N(alkyl), NO; B and D = independently H, (un) substituted (cyclo)alkyl, hetero(cyclo)alkyl, aryl(alkyl), or heterocycle; E = absent or O, S, or NH; F = N, NCH2, or CH2N; G and (un) substituted K = independently absent or (cyclo) alkyl interrupted by 1 or more heteroatoms; J = absent or (un)substituted arvl or heterocycle; L = H, halogen, OH, (un) substituted alkoxy, alkyl, amino, etc.; X1-X4 = independently C or N], which display inhibitory effects on serine proteases such as factor Xa, thrombin, trypsin, and/or factor VIIa, were prepd. For example, 1,5-dibromopentane was added to 4-(benzyloxy)-3-(3-oxo-3,4-dihydro-2quinoxalinyl)benzenecarbonitrile (6-step prepn. given) to yield the N-substituted dihydroquinoxaline. Cis-2,6-dimethylpiperidine was added to the 5-bromopentylquinoxalinone to form the piperidinylpentyl deriv. This intermediate was debenzylated and the nitrile converted to the carboximidamide to form the title quinoxalinone (II).2HCl. Typically, the compds. of the invention showed 50% inhibition of factor Xa proteolytic activity on a synthetic substrate in concns. ranging from 50 .mu.M to 1 nM. II demonstrated inhibitory activity in std. assays of thrombin (IC50 = 2.96 .mu.M), trypsin (IC50 = 2.03 .mu.M), and factor Xa (IC50 = 0.065 .mu.M). At a concn. of 100 .mu.M, II inhibited the catalytic activity of human tissue factor/factor VIIa complex by 16%. In an in vitro assay, II demonstrated human prothrombinase (PTase) complex inhibition with an IC50 of 0.0015 .mu.M. The effects of II on thrombosis and hemostasis was studied in a rabbit veno-venous shunt model and in a dog electrolytic injury model of thrombosis. At the highest dose, II prolonged a PTT and PT by a 5- and 3.9-fold, resp., for the veno-venous shunt model and by 1.4- and 1.75-fold, resp., for the electrolytic injury model. Compds. of the invention are claimed to be useful in the treatment or prevention of venous and arterial thrombosis, pulmonary embolism, myocardial and cerebral infarction, restenosis, cancer, angina, diabetes, heart failure, and atrial fibrillation in mammals.
- RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L6 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
- AN 1998:141160 CAPLUS
- TI Design, synthesis and biological activity of novel **factor xa** inhibitors. 10. Optimization of dibenzyl cyclic urea analogs.
- AU Chou, Y.-L.; Guilford, W. J.; Koovakkat, S.; Mohan, R.; Wu, S. C.; Liang, A.; Trinh, L.; Morrissey, M. M.
- CS Berlex Biosciences, Richmond, CA, 94804, USA
- SO Book of Abstracts, 215th ACS National Meeting, Dallas, March 29-April 2 (1998), MEDI-130 Publisher: American Chemical Society, Washington, D. C. CODEN: 65QTAA
- DT Conference; Meeting Abstract
- LA English

## 10030188.2 Page 22

AB Inhibitors of factor Xa, a serine
protease involved in the coagulation cascade, are being developed
both for the treatment and prevention of thrombotic
disorders. Compds. 1 and 2 are novel factor Xa
inhibitors that display selectivity over other serine
proteases in the coagulation cascade. The synthesis and SAR of
these compds. will be described.

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L6 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
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AN 1998:31312 CAPLUS

DN 128:102394

TI Preparation of pyrrolo[1,2-a]pyrazine-1,4-dione serine protease inhibitors

IN Berryman, Kent Alan; Doherty, Annette Marian; Edmunds, Jeremy John; Siddiqui, M. Arshad

PA Warner-Lambert Co., USA; Berryman, Kent Alan; Doherty, Annette Marian; Edmunds, Jeremy John; Siddiqui, M. Arshad

SO PCT Int. Appl., 71 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

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R^{6} & B-N & Q \\
& A & I
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This invention relates to pyrrolo[1,2-a]pyrazine-1,4-diones I (B = CO, CH2; R2, R4, R5, R6 = independently H, alkyl, substituted alkyl; A = basic group; Q = H, keto heterocycle group; p = 0-2). The compds. are inhibitors of serine proteases, typically thrombin,

Factor Xa, and Factor VIIa, and are useful for treating and preventing thrombotic disorders. Thus, title deriv. II was prepd. in 14 steps from Z-Asp-OCMe3 (Z = PhCH2O2C), Ph(CH2)3-Gly-OCH2Ph, Boc-Arg(Mtr)-OH (Boc = Me3CO2C; Mtr = 4-methoxy-2,3,6-trimethylphenylsulfonyl), and thiazole.II inhibited thrombin with Ki = 3 nM, factor Xa at 30 nM, and trypsin <1 nM.

II

L6 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

AN 1995:76729 CAPLUS

DN 122:229811

TI Factor Xa inhibitors

AU Mao, Shi-Shan

CS Merck Research Laboratories, Department Biological Chemistry, West Point, PA, 19486, USA

SO Perspectives in Drug Discovery and Design (1994), 1(3), 423-30 CODEN: PDDDEC; ISSN: 0928-2866

DT Journal; General Review

LA English

AB A review with 50 refs. Factor Xa is the serine protease that activates prothrombin to yield thrombin. Inhibitors of factor Xa play a crucial role in curtailing thrombin generation. Two key factor Xa inhibitors that are found in blood are antithrombin III and tissue factor pathway inhibitor. Inhibition of factor Xa is a mechanism that is also exploited by certain hematophagous animals to

facilitate feeding. Evaluation of tick anticoagulant peptide (TAP) and leech-derived antistasin (ATS) using animal models of thrombotic disorders has confirmed that specific blockade of factor Xa activity is an effective antithrombotic strategy. Several labs. are currently pursuing low-mol. wt. synthetic factor Xa inhibitors for use as anticoagulants in the treatment and/or prevention of thrombosis.

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     Preparation of amino acid derivatives as serine protease
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     Clinton; Camp, Nicholas Paul; Jones, Stuart Donald; Wylie, William
     Alexander; Masters, John Joseph; Wiley, Michael Robert; Sheehan, Scott
     Martin; Engel, David Birenbaum; Watson, Brian Morgan
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     PCT Int. Appl., 188 pp.
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OS MARPAT 136:37947

IT 380900-59-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of amino acid derivs. as serine protease
inhibitors)

RN 380900-59-4 CAPLUS

CN Benzeneacetamide, .alpha.-[(4-methoxybenzoyl)amino]-N-[[1-(1-methylethyl)-4-piperidinyl]methyl]-2-[(trifluoromethyl)thio]- (9CI) (CA INDEX NAME)

Compds. R2-X-X-Y(Cy)-L-Lp(D)n [R2 is a 5- or 6-membered arom. carbon ring AΒ optionally interrupted by a N, O or S ring atom, optionally substituted at the 3 and/or 4 position or forms a fused ring system at these positions, which is an optionally substituted 5- or 6-membered carbocyclic or heterocyclic ring, or substituted at the position alpha to X-X; X is a C, N, O or S atom or a CO, CR1a, C(R1a)2 or NR1a group, where R1a represents H, OH, alkoxy, alkyl, aminoalkyl, hydroxyalkyl, alkoxyalkyl, alkoxycarbonyl, alkylaminocarbonyl, alkoxycarbonylamino, acyloxymethoxycarbonyl or alkylamino optionally substituted by OH, alkylamino, alkoxy, oxo, aryl or cycloalkyl; Y is a N atom or a CR1b group (R1b defined as for R1a); Cy is an (un)substituted, (un)satd., mono- or polycyclic, homo- or heterocyclic group; L is an org. linker group contg. 1 to 5 backbone atoms selected from C, N, O and S, or a branched alkyl or cyclic group; -Lp(D)n is 1-[R10-(Lb)u-(G)t-(La)s]-3-pyrrolidinyl or -4-piperidinyl, where s, t and u = 0 or 1; La and Lb is a single bond, CO, O, NH or alkylimino; G = alkanediyl; R10 = alkyl, cycloalkyl, indanyl, pyridyl, tetrahydropyranyl, (un) substituted Ph, etc.] or their physiol.-tolerable salts were prepd. for use as serine protease and factor Xa inhibitors in the treatment of cardiovascular disorders. Compds. of the invention were found to significantly elongate the partial thromboplastin time (prothrombin time). Thus, 4-[(4-methoxybenzoyl-Dphenylglycinyl)aminomethyl]-1-isopropylpiperidine was prepd. in the first of 106 examples.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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COST IN U.S. DOLLARS
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ENTRY SESSION
FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
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